

**REMARKS**

Upon entry of the present amendment, claims 1-3, 7-12, 14 and 16-22 will remain pending in the above-identified application, and stand ready for further action on the merits, with claim 21 previously being indicated as allowed.

The amendments made herein to the claims do not incorporate new matter into the Application as originally filed. For example, the following support is noted for the claim amendments made herein:

- Claim 1*** - Incorporates features from cancelled claims 4-5;
- Claim 2*** - Incorporates features from cancelled claim 6;
- Claim 3*** - Claim dependency is simply changed;
- Claim 7*** - Claim dependency is simply changed;
- Claim 8*** - Written as independent claim incorporating features from cancelled claims 4-5;
- Claim 9*** - Written as independent claim incorporating features from cancelled claims 4-5;
- Claim 10*** - Written as independent claim incorporating features from cancelled claims 4-5;
- Claim 11*** - Written as independent claim incorporating features from cancelled claim 6;
- Claim 14*** - Written as independent claim incorporating features from cancelled claim 15;
- Claim 18*** - Written as independent claim incorporating features from claims 14 and 16.

Additionally, newly added method claim 22 is based on claim 1 (*before being instantly amended*) but with a further recitation in the blowing hot air step of “*without melting fibers*”

*constituting said nonwoven fabric*” which further language finds support throughout the originally filed application, including page 8, lines 26-28 thereof.

Accordingly, entry of the instant amendment is respectfully requested at present.

***Allowable Subject Matter***

At page 3 of the outstanding office action, the Examiner states that “claims 5, 6, 15 and 18 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” The Examiner also states that claim 21 is allowed.

Applicants appreciate the Examiner’s courtesy in apprising them of allowable subject matter. Such comments have been helpful in guiding Applicants in their drafting of the current amendment. For example, amended claims 1-2, 8-11 and 14 now recite limitations from at least one of prior claim 5, 6 and 15 (*which claims have herein been cancelled to prevent a redundancy with currently pending claims*).

More particularly, upon review of the instantly amended claims, the Examiner will see that the currently drafted claims 1-3, 7-12, 14 and 16-21 have taken advantage of the Examiner’s statement of allowable subject matter in the outstanding office action, wherein the pending claims have been amended in a fashion that should result in an immediate allowance thereof, by the recitation in each of these pending claims (either directly or through principles of claim dependency) limitations from at least one of prior claims 5, 6 and 15 (which are cancelled herein) or claim 18 (still pending) or claim 21 (still pending).

***Claim Rejections 35 USC §103(a)***

Claims 1-4, 7-14, 16-17 and 19-20 have been rejected under the provisions of 35 USC § 103(a) as being obvious and therefore unpatentable over European Patent Application 0 538 047 (EP '047). Reconsideration and withdraw of this rejection is respectfully requested based on the amendments made herein to the claims, and the following remarks.

***Legal Standard for Determining Prima Facie Obviousness***

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.). The level of skill in the art cannot be relied upon to provide the suggestion to

combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

“In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

**Distinctions Over the Cited Art**

As indicated above, the claims have been amended so that each of the instantly pending claims 1-3, 7-12, 14 and 16-21 recite limitations found in at least one of prior claims 5, 6 and 15 (now cancelled) or in pending claim 18 or 21. Based on such amendments, it is submitted that the instant rejection under the provisions of 35 USC § 103(a) over the cited EP '047 reference is not sustainable, as the cited EP '047 reference does not teach, disclose or otherwise motivate one of ordinary skill in the art to arrive at the invention now recited in each of pending claims 1-3, 7-12, 14 and 16-21. Any contentions of the US PTO to the contrary must be reconsidered.

Regarding newly added independent claim 22 the following points of distinction are brought to the Examiner's attention. In instant claim 22, the following step is recited:

*"blowing hot air to the unwound nonwoven fabric for from about 0.05 to 3 seconds, by a through-air technique, thereby increasing the bulkiness of the nonwoven fabric without melting fibers constituting said nonwoven fabric, wherein..." (Emphasis Added)*

The importance of the above step in the claimed method becomes evident upon reviewing the instant specification, e.g., at page 8, lines 14-30, wherein it is taught that:

*... The present inventors have unexpectedly found that the hot air blowing in the through-flow system makes the nonwoven fabric 10 with reduced bulkiness increase its bulkiness to restore substantially the same bulkiness as before. Reduction in bulkiness of the nonwoven fabric 10 due to winding pressure is observed remarkably in the first layer 11 containing crimped fibers. It has been ascertained that the hot air blow makes the first layer 11 restore the bulkiness to a considerable degree. This means that the bulkiness restoration of the nonwoven*

*fabric 10 relies chiefly on bulkiness restoration of the crimped fiber contained in the first layer 11. From this viewpoint, the temperature of the hot air blown to the nonwoven fabric 10 should be lower than the melting point of the crimped thermoplastic fiber (hereinafter referred to as  $MP_T$ ) and not lower than a temperature lower than  $MP_T$  by about  $50^\circ\text{C}$ . If the hot air temperature is lower than about  $(MP_T-50)^\circ\text{C}$ , sufficient effects of hot air blowing are not produced, resulting in a failure to restore bulkiness. If the temperature of the hot air is equal to or higher than  $MP_T$ , the crimped fiber may melt, also resulting in a failure to restore bulkiness. To achieve effective restoration of bulkiness of the nonwoven fabric 10, a preferred temperature of the hot air ranges from about  $(MP_T-50)^\circ\text{C}$  to  $(MP_T-3)^\circ\text{C}$ , preferably from about  $(MP_T-30)^\circ$  to  $(MP_T-5)^\circ\text{C}$ . (Emphasis Added)*

In contrast to the inventive method recited in claim 22, the cited EP '047 reference at page 3, lines 10-16 thereof, teaches that its interim product should be heated to a temperature that is above the softening point of its tacking fiber to weaken or destroy bonding points created in its heating and compressing steps:

The above-described heating and compressing step normally precedes storage, usually by rolling the compressed interim sheet product, and transporting it to another processing location. The method according to the invention therefore also may include the step of rebulking the interim sheet product for its intended use, characterized in that the said interim product is heated to a temperature below the melting point, and preferably below the softening point, of the lower softening point component of the bicomponent fiber and above the softening point of the tacking fiber to weaken or destroy bonding points created in the heating and compressing step and thereby to allow the webs to expand to a high-loft nonwoven material.

Again, such teachings are in contrast to the instant invention, wherein the nonwoven fabric is treated at a temperature below the melting point of the fibers constituting the said nonwoven fabric, and thus the bulkiness of nonwoven fabric is restored without the decrease in strength of the nonwoven fabric and without melting fibers constituting said nonwoven fabric.

Further, while in the cited EP '047 reference, an air jet is used to melt the tacking fiber, this is not what occurs in the instant invention as recited in claim 22. Instead, in the instant invention, a through-air technique is used to restore bulkiness to a nonwoven fabric *without melting fibers constituting said nonwoven fabric*. This through-air technique is submitted to be more advantageous and than an air jet (as taught in EP '047) in that said bulkiness recovers uniformly because heat is uniformly transmitted by use of the recited through-air technique in claim 22.

### **CONCLUSION**

Based on the amendments and remarks presented herein, the Examiner is respectfully requested to issue a notice of allowance, clearly indicating that each of pending claims 1-3, 7-12, 14 and 16-22 is allowable at present under the provisions of title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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